What is claimed is:

[Claim 1] 1. A method for inhibiting stalling of an engine of a hybrid electric vehicle, the hybrid electric vehicle including a power transfer unit adapted to drive a vehicle wheel and having a plurality of gear ratios and at least one power source adapted to drive the power transfer unit, the method comprising:

determining whether the engine is running;

determining whether a gear ratio of the power transfer unit is selected; and

implementing a stall mitigation strategy for a predetermined period of time if the engine is running and a gear ratio is selected.

[Claim 2] 2. The method of claim 1 wherein the hybrid electric vehicle further comprises an electrical machine coupled to the engine and adapted to be powered by the at least one power source and the step of implementing the stall mitigation strategy includes providing supplemental torque to the engine with the electrical machine to keep an engine speed above a first threshold speed value.

[Claim 3] 3. The method of claim 2 wherein the engine speed is measured at an output shaft of the engine.

[Claim 4] 4. The method of claim 2 wherein the electrical machine is a starter-alternator.

[Claim 5] 5. The method of claim 2 wherein the first threshold speed value is less than an engine idle speed.

[Claim 6] 6. The method of claim 1 further comprising the step of terminating the stall mitigation strategy if an engine speed is greater than a second threshold speed value.

[Claim 7] 7. The method of claim 6 wherein the second threshold speed value is greater than an engine idle speed.

[Claim 8] 8. The method of claim 6 wherein the hybrid electric vehicle further comprises an accelerator pedal and the step of terminating the stall mitigation strategy further comprises terminating the stall mitigation strategy when the accelerator pedal is actuated.

[Claim 9] 9. The method of claim 8 wherein the hybrid electric vehicle further comprises an accelerator pedal position sensor configured to detect actuation of the accelerator pedal.

[Claim 10] 10. The method of claim 6 wherein the hybrid electric vehicle further comprises a gear selector sensor and the step of determining whether a gear ratio of the power transfer unit is selected is based on a signal from the gear selector sensor.

[Claim 11] 11. A method for inhibiting stalling of an engine of a hybrid electric vehicle, the hybrid electric vehicle including a set of power sources that includes the engine and at least one secondary power source, a power transfer unit having a plurality of gear ratios adapted to drive a vehicle wheel, an electrical machine adapted to be powered by at least one member of the set of power sources and coupled to the engine and the power transfer unit, a first signal indicative of an engine speed, and a second signal indicative of a desired gear ratio of the power transfer unit, the method comprising:

determining whether the engine is running based on the first signal;

determining whether a gear ratio of the power transfer unit is selected based on the second signal;

implementing a stall mitigation strategy to keep the engine speed above a first threshold speed value if the engine is running and a gear ratio of the power transfer unit is selected; and

terminating the stall mitigation strategy if a predetermined period of time has elapsed.

[Claim 12] 12. The method of claim 11 wherein the stall mitigation strategy is terminated if the engine speed exceeds a second threshold speed value.

[Claim 13] 13. The method of claim 12 wherein the hybrid vehicle further comprises an accelerator pedal position sensor and the stall mitigation strategy is terminated based on a signal from the accelerator pedal position sensor indicative of a request for vehicle acceleration.

[Claim 14] 14. The method of claim 12 wherein the first threshold speed value is less than the second threshold speed value.

[Claim 15] 15. The method of claim 11 wherein the electrical machine is a starter-alternator.

[Claim 16] 16. The method of claim 11 wherein the electrical machine is a motor-generator.

[Claim 17] 17. The method of claim 11 wherein the hybrid electric vehicle further comprises a gear selector sensor and the step of determining whether a gear ratio of the power transfer unit is selected is based on a signal from the gear selector sensor.

[Claim 18] 18. The method of claim 11 wherein the step of implementing the stall mitigation strategy includes powering the electrical machine with at least one member of the set of power sources and providing torque to the engine with the electrical machine to keep the engine speed above the first threshold speed value.

[Claim 19] 19. A method for inhibiting stalling of an internal combustion engine of a hybrid electric vehicle due to loading of an engine output shaft, the hybrid electric vehicle including a power transfer unit adapted to drive at least one vehicle wheel and having a plurality of gear ratios, a set of power sources including an engine and at least one voltage source, a starter-alternator coupled to the engine and the power transfer unit and adapted to be powered by at least one member of the set of power sources, and an accelerator pedal, the method comprising:

determining whether the engine is running;

determining whether a gear ratio has been selected by a vehicle operator;

starting a timer;

implementing a stall mitigation strategy to maintain the engine speed above a first threshold speed value wherein the starter-alternator is powered by the at least one voltage source to provide torque to the engine if a gear ratio has been selected; and

discontinuing the stall mitigation strategy if the engine speed is greater than a second threshold speed value, a predetermined period of time has elapsed, or if the accelerator pedal is actuated.

[Claim 20] 20. The method of claim 19 wherein the step of determining whether a gear ratio has been selected by a vehicle operator is based on a signal indicative of engagement of a gear ratio of the power transfer unit.